

WHAT IS CLAIMED IS:

1. A multicolor image-forming material comprising:  
an image-receiving sheet comprising an image-receiving layer; and

at least four thermal transfer sheets each comprising a support, a photothermal converting layer and an image-forming layer, and each having a different color,

wherein an image is formed by the method comprising the steps of:

superposing each one of the at least four thermal transfer sheets on the image-receiving sheet to be in a state of the image-forming layer being in contact with the image-receiving layer; and

irradiating the thermal transfer sheet with a laser beam to transfer an image in an area of the image-forming layer subjected to irradiation onto the image-receiving layer,

and a ratio of the reflection optical density ( $OD_r$ ) of the image-forming layer to a thickness of the image-forming layer ( $\mu\text{m}$  unit) is 1.50 or more, and a contact angle in relation to water of the image-forming layer and the image-receiving layer is from 7.0 to 120.0°.

2. The multicolor image-forming material according to claim 1, wherein a difference between the contact angle in relation to water of the image-forming layer and the contact angle in

relation to water of the image-receiving layer is  $73^{\circ}$  or less.

3. The multicolor image-forming material according to claim 1, wherein a difference between the contact angle in relation to water of the image-forming layer and the contact angle in relation to water of the image-receiving layer is  $65^{\circ}$  or less.

4. The multicolor image-forming material according to claim 1, wherein the image-forming layer comprises a first binder comprising a monomer unit and the image-receiving layer comprises a second binder comprising a monomer unit, and at least one of the monomer unit of the first binder and at least one of the monomer unit of the second binder are the same.

5. The multicolor image-forming material according to claim 4, wherein the same monomer unit is a vinyl acetal unit.

6. The multicolor image-forming material according to claim 4, wherein at least one of the same monomer unit is selected from a styrene unit, a butyral unit and a styrene acrylate unit.

7. The multicolor image-forming material according to claim 1, wherein each of the at least four thermal transfer sheets and the image-receiving sheet comprises a coating layer and at least one of the coating layer comprises a surface tension

decreasing agent

8. The multicolor image-forming material according to claim 7, wherein the surface tension decreasing agent is capable of:

making a surface tension of 1-propanol 22.5 mN/m or less at the time of being contained in a solvent of 1-propanol to be in concentration of 0.5 % by weight;

making a surface tension of methyl ethyl ketone 22.5 mN/m or less at the time of being contained in a solvent of methyl ethyl ketone to be in concentration of 0.5 % by weight; and

making a surface tension of N-methyl-2-pyrrolidone 25.0 mN/m or less at the time of being contained in a solvent of N-methyl-2-pyrrolidone to be in concentration of 0.5 % by weight.

9. The multicolor image-forming material according to claim 7, wherein the surface tension decreasing agent is a perfluoroalkylpolyoxyalkylene oligomer.

10. The multicolor image-forming material according to claim 1, wherein each of the at least four thermal transfer sheets and the image-receiving sheet comprises a coating layer and at least one of the coating layer comprises at least two kinds of waxes having a melting point of 100°C or less.

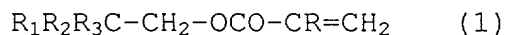
11. The multicolor image-forming material according to claim 10, wherein the wax is a fatty acid amide.

12. The multicolor image-forming material according to claim 11, wherein the fatty acid amide comprises a fatty acid amide in which a fatty acid moiety is a saturated fatty acid and a fatty acid amide in which a fatty acid moiety is an unsaturated fatty acid.

13. The multicolor image-forming material according to claim 10, wherein at least one of the coating layer comprises at least one of monomethacrylate, monoacrylate, dimethacrylate, diacrylate, trimethacrylate, triacrylate, tetramethacrylate and tetraacrylate.

14. The multicolor image-forming material according to claim 10, wherein at least one of the coating layer comprises one of:

a monomer represented by the following formula (1):



wherein  $R_1$ ,  $R_2$  and  $R_3$  each independently represents one of a hydrogen atom, a lower alkyl group, and a  $-CH_2-OCO-CR=CH_2$  group in which R represents one of a hydrogen atom and a methyl group; and

a homo- or copolymer comprising the monomer as the main

component.

15. The multicolor image-forming material according to claim 1, wherein the image-forming layer comprises a rosin-based resin having a softening point of 100°C or less measured by a ring and ball method and an acid value of from 2 to 220 measured according to JIS K3504.

16. The multicolor image-forming material according to claim 15, wherein the rosin-based resin is a resin selected from a rosin, a hydrogenated rosin, a modified rosin, derivatives of these rosins, and a rosin-modified maleic acid resin.

17. The multicolor image-forming material according to claim 15, wherein the rosin-based resin comprises 30 % by weight or more of an abietic acid type rosin acid.

18. The multicolor image-forming material according to claim 15, wherein the rosin-based resin is an esterified product of a rosin comprising 30 % by weight or more of an abietic acid type rosin acid and at least one kind of polyhydric alcohol selected from ethylene glycol, glycerol and pentaerythritol.

19. The multicolor image-forming material according to claim 1, wherein the image-receiving layer comprises a

rosin-based resin having a softening point of less than 130 °C measured by a ring and ball method and an acid value of from 2 to 250 measured according to JIS K3504.

20. The multicolor image-forming material according to claim 1, wherein a ratio of an optical density ( $OD_{LH}$ ) of the photothermal converting layer to a thickness of the photothermal converting layer ( $\mu\text{m}$  unit) is 4.36 or more.

21. The multicolor image-forming material according to claim 1, wherein the transferred image by the irradiation step has resolution of 2,400 dpi or more.

22. The multicolor image-forming material according to claim 1, wherein an area of the image-receiving layer on which an image is transferred by the irradiation step is a size of 515 x 728 mm or more.

23. The multicolor image-forming material according to claim 1, wherein a ratio of the reflection optical density ( $OD_r$ ) of the image-forming layer to a thickness of the image-forming layer ( $\mu\text{m}$  unit) is 2.50 or more.

24. The multicolor image-forming material according to claim 1, wherein a ratio of the reflection optical density

(OD<sub>r</sub>) of the image-forming layer to a thickness of the image-forming layer (μm unit) is 1.80 or more, and a contact angle in relation to water of the image-receiving layer is 86° or less.

25. The multicolor image-forming material according to claim 1, wherein the photothermal converting layer comprises a heat resisting resin having a glass transition temperature of from 200°C to 400°C and a heat decomposition temperature of 450°C or more.

26. The multicolor image-forming material according to claim 25, wherein the heat resisting resin is an organic solvent-soluble polyimide resin.

27. The multicolor image-forming material according to claim 1, wherein the image-forming layer comprises from 20 to 80 % by weight of a pigment and 20 to 80 % by weight of an amorphous organic high molecular weight polymer having a softening point of from 40 to 150°C, and the image-forming layer has a thickness of from 0.2 μm to 1.5 μm.

28. A method for forming a multicolor image using the image-receiving sheet according to claim 1 and the at least four thermal transfer sheets according to claim 1, the method comprising the steps of:

superposing each one of the at least four thermal transfer sheets on the image-receiving sheet to be in a state of the image-forming layer being in contact with the image-receiving layer; and

irradiating the thermal transfer sheet with a laser beam to transfer an image in an area of the image-forming layer subjected to irradiation onto the image-receiving layer, wherein each of the image-forming layer is a thin film.